

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Withdrawn): A method for forming a semiconductor device comprising:
forming a semiconductor film comprising silicon over a substrate; and
irradiating said semiconductor film with a linear laser light to form a region to become at least a channel formation region in said semiconductor film,
wherein said region to become at least a channel formation region contains hydrogen at a concentration of 1×10^{15} to 1×10^{20} atoms cm⁻³, also contains carbon and nitrogen at a concentration of 1×10^{16} to 5×10^{18} atoms cm⁻³, and further contains oxygen at a concentration of 1×10^{17} to 5×10^{19} atoms cm⁻³.
2. (Withdrawn): A method for forming a semiconductor device comprising:
forming a semiconductor film comprising silicon over a substrate; and
irradiating said semiconductor film with a linear laser light to form a region to become at least a channel formation region in said semiconductor film,
wherein said region to become at least a channel formation region contains hydrogen and halogen at a concentration of 1×10^{15} to 1×10^{20} atoms cm⁻³, also contains carbon and nitrogen at a concentration of 1×10^{16} to 5×10^{18} atoms cm⁻³, and further contains oxygen at a concentration of 1×10^{17} to 5×10^{19} atoms cm⁻³.
3. (Withdrawn): A method for forming a semiconductor device comprising:
forming a semiconductor film comprising silicon over a substrate; and
irradiating said semiconductor film with a linear laser light to form a single-crystalline region or region equivalent to the single-crystalline region to become at least a channel formation

region in said semiconductor film,

wherein said single-crystalline region or region equivalent to the single-crystalline region contains substantially no crystal boundary therein, contains hydrogen at a concentration of 1×10^{15} to 1×10^{20} atoms cm^{-3} , also contains carbon and nitrogen at a concentration of 1×10^{16} to 5×10^{18} atoms cm^{-3} , and further contains oxygen at a concentration of 1×10^{17} to 5×10^{19} atoms cm^{-3} .

4. (Withdrawn): A method for forming a semiconductor device comprising:

forming a semiconductor film comprising silicon over a substrate; and
irradiating said semiconductor film with a linear laser light to form a single-crystalline region or region equivalent to the single-crystalline region to become at least a channel formation region in said semiconductor film,

wherein said single-crystalline region or region equivalent to the single-crystalline region contains substantially no crystal boundary therein, contains hydrogen and halogen at a concentration of 1×10^{15} to 1×10^{20} atoms cm^{-3} , also contains carbon and nitrogen at a concentration of 1×10^{16} to 5×10^{18} atoms cm^{-3} , and further contains oxygen at a concentration of 1×10^{17} to 5×10^{19} atoms cm^{-3} .

5. (Withdrawn): A method for forming a semiconductor device comprising:

forming an amorphous semiconductor film comprising silicon over a substrate;
forming an amorphous semiconductor island comprising silicon by etching said amorphous semiconductor film into a first shape having a narrowest width of $100 \mu\text{m}$ or less;
irradiating said semiconductor island with a linear laser light to form a single-crystalline region or region equivalent to the single-crystalline region to become at least a channel formation region in said semiconductor island; and
etching an end portion of said semiconductor island to narrow a portion of said semiconductor island from said end portion of said semiconductor island by $10 \mu\text{m}$ or more to form a second shape semiconductor region which has the narrowed portion in at least said

channel formation region,

wherein said single-crystalline region or region equivalent to the single-crystalline region contains substantially no crystal boundary therein, contains hydrogen and halogen at a concentration of 1×10^{15} to 1×10^{20} atoms cm⁻³, also contains carbon and nitrogen at a concentration of 1×10^{16} to 5×10^{18} atoms cm⁻³, and further contains oxygen at a concentration of 1×10^{17} to 5×10^{19} atoms cm⁻³.

6. (Withdrawn): A method according to claim 1 wherein said linear laser light is a laser light selected from the group consisting of a KrF excimer laser light, a XeCl excimer laser light, a Nd:YAG laser light, a second harmonic of said Nd:YAG laser light and a third harmonic of said Nd:YAG laser light.

7. (Withdrawn): A method according to claim 1 wherein said substrate is selected from the group consisting of a glass substrate and a quartz substrate.

8. (Withdrawn): A method according to claim 2 wherein said linear laser light is a laser light selected from the group consisting of a KrF excimer laser light, a XeCl excimer laser light, a Nd:YAG laser light, a second harmonic of said Nd:YAG laser light and a third harmonic of said Nd:YAG laser light.

9. (Withdrawn): A method according to claim 2 wherein said substrate is selected from the group consisting of a glass substrate and a quartz substrate.

10. (Withdrawn): A method according to claim 3 wherein said linear laser light is a laser light selected from the group consisting of a KrF excimer laser light, a XeCl excimer laser light, a Nd:YAG laser light, a second harmonic of said Nd:YAG laser light and a third harmonic of said Nd:YAG laser light.

11. (Withdrawn): A method according to claim 3 wherein said substrate is selected from the group consisting of a glass substrate and a quartz substrate.

12. (Withdrawn): A method according to claim 4 wherein said linear laser light is a laser light selected from the group consisting of a KrF excimer laser light, a XeCl excimer laser light, a Nd:YAG laser light, a second harmonic of said Nd:YAG laser light and a third harmonic of said Nd:YAG laser light.

13. (Withdrawn): A method according to claim 4 wherein said substrate is selected from the group consisting of a glass substrate and a quartz substrate.

14. (Withdrawn): A method according to claim 5 wherein said linear laser light is a laser light selected from the group consisting of a KrF excimer laser light, a XeCl excimer laser light, a Nd:YAG laser light, a second harmonic of said Nd:YAG laser light and a third harmonic of said Nd:YAG laser light.

15. (Withdrawn): A method according to claim 5 wherein said substrate is selected from the group consisting of a glass substrate and a quartz substrate.

16. (Withdrawn): A method according to claim 1 wherein said semiconductor device is a liquid crystal display.

17. (Withdrawn): A method according to claim 2 wherein said semiconductor device is a liquid crystal display.

18. (Withdrawn): A method according to claim 3 wherein said semiconductor device is a liquid crystal display.

19. (Withdrawn): A method according to claim 4 wherein said semiconductor device is a liquid crystal display.

20. (Withdrawn): A method according to claim 5 wherein said semiconductor device is a liquid crystal display.

21. (Withdrawn): A method of manufacturing a semiconductor device comprising the steps of:

forming an amorphous semiconductor film over a substrate;

irradiating the amorphous semiconductor film with a CW laser having a wavelength of 532 nm to crystallize the amorphous semiconductor film; and

patterning the crystallized semiconductor film to form an active layer including at least a channel formation region.

22. (Withdrawn): The method according to claim 21 wherein said amorphous semiconductor film comprises amorphous silicon.

23. (Withdrawn): A method of manufacturing a semiconductor device comprising the steps of:

forming an amorphous semiconductor film over a substrate;

irradiating the amorphous semiconductor film with a CW laser having a wavelength of 355 nm to crystallize the amorphous semiconductor film; and

patterning the crystallized semiconductor film to form an active layer including at least a channel formation region.

24. (Withdrawn): The method according to claim 23 wherein said amorphous semiconductor film comprises amorphous silicon.

25. (Previously presented): A method of manufacturing a semiconductor device comprising the steps of:
- forming an amorphous semiconductor film over a substrate;
- irradiating the amorphous semiconductor film with a second harmonic of a continuous wave laser comprising Nd to crystallize the amorphous semiconductor film; and
- patterning the crystallized semiconductor film to form an active layer including at least a channel formation region.
26. (Previously presented): The method according to claim 25 wherein said amorphous semiconductor film comprises amorphous silicon.
27. (Previously presented): The method according to claim 25 wherein said continuous wave laser comprising Nd is an Nd:YAG laser.
28. (Previously presented): A method of manufacturing a semiconductor device comprising the steps of:
- forming an amorphous semiconductor film over a substrate;
- irradiating the amorphous semiconductor film with a third harmonic of a continuous wave laser comprising Nd to crystallize the amorphous semiconductor film; and
- patterning the crystallized semiconductor film to form an active layer including at least a channel formation region.
29. (Previously presented): The method according to claim 28 wherein said amorphous semiconductor film comprises amorphous silicon.
30. (Previously presented): The method according to claim 28 wherein said continuous wave laser comprising Nd is an Nd:YAG laser.
31. (New): A method of manufacturing a semiconductor device, the method comprising:

forming an amorphous semiconductor film over a substrate;
irradiating the amorphous semiconductor film with a second harmonic of a laser comprising Nd to crystallize the amorphous semiconductor film; and
 patterning the crystallized semiconductor film to form an active layer including at least a channel formation region.

32. (New): The method according to claim 31 wherein said amorphous semiconductor film comprises amorphous silicon.

33. (New): The method according to claim 31 wherein said laser comprising Nd is a Nd:YAG laser.

34. (New): A method of manufacturing a semiconductor device, the method comprising:
 forming an amorphous semiconductor film over a substrate;
 irradiating the amorphous semiconductor film with a third harmonic of a laser comprising Nd to crystallize the amorphous semiconductor film; and
 patterning the crystallized semiconductor film to form an active layer including at least a channel formation region.

35. (New): The method according to claim 34 wherein said amorphous semiconductor film comprises amorphous silicon.

36. (New): The method according to claim 34 wherein said laser comprising Nd is a Nd:YAG laser.

37. (New): A method of manufacturing a semiconductor device, the method comprising:
 forming an amorphous semiconductor film over a substrate;

patterning the amorphous semiconductor film into a first shape amorphous semiconductor island;

irradiating the first shape amorphous semiconductor island with a second harmonic of a laser comprising Nd to crystallize the first shape amorphous semiconductor island; and

patterning the crystallized semiconductor island into a second shape semiconductor island including at least a channel formation region.

38. (New): The method according to claim 37 wherein said amorphous semiconductor film comprises amorphous silicon.

39. (New): The method according to claim 37 wherein said laser comprising Nd is a Nd:YAG laser.

40. (New): A method of manufacturing a semiconductor device, the method comprising:
forming an amorphous semiconductor film over a substrate;
patterning the amorphous semiconductor film into a first shape amorphous semiconductor island;

irradiating the first shape amorphous semiconductor island with a third harmonic of a laser comprising Nd to crystallize the first shape amorphous semiconductor island; and

patterning the crystallized semiconductor island into a second shape semiconductor island including at least a channel formation region.

41. (New): The method according to claim 40 wherein said amorphous semiconductor film comprises amorphous silicon.

42. (New): The method according to claim 40 wherein said laser comprising Nd is a Nd:YAG laser.